

Docket No.: P-0216

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Sun Jin PARK

Serial No.: 09/853,668

Filed: May 14, 2001

For: METHOD AND APPARATUS FOR ADJUSTING A BRIGHTNESS OF A  
DISPLAY SCREEN

**EXPEDITED PROCEDURE  
UNDER 37 C.F.R. §1.116**

Confirmation No.: 6826

Group Art Unit: 2675

Examiner: Chanh Nguyen

PATENT

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Sir:

In response to the Final Office Action dated February 23, 2004, reconsideration of the rejections set forth therein is respectfully requested.

Claims 1-62 are pending in the application. Claims 1-13, 19-23, 29-31, 38-42, 48-54, 57 and 58 have been withdrawn by the Examiner.

The Examiner is thanked for the courtesies extended to Applicant's representative at the May 4 personal interview. The points discussed are incorporated herein.

The Office Action withdrew from consideration claims 1-13, 19-23, 29-31, 38-42, 48-54, and 57-78, alleging that these claims do not read on the Species of Fig. 2A. Applicant respectfully submits that the restriction requirement of these claims is improper, maintaining the traversal of the Restriction Requirement set forth in the Reply to the Election Requirement filed June 19, 2003. Further, Applicant respectfully asserts that claims 1, 6, 11-18, 24, 30-37, 43, 49,



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and 50-62 read on the elected species of Figures 2A. These claims are also generic to the species of Figures 2B-2F.

As discussed in the May 4 personal interview, Figure 2A of the present application is a flow chart illustrating a method according to an embodiment of the invention for adjusting a brightness of a display screen. Figure 2A is discussed in, for example, paragraphs 29-31 of the present application. Fig. 2A includes the step of determining whether display related processes are running, in step S24. As set forth in paragraph 29, “[d]isplay related processes’ may include any display intensive use of the computer where the user is watching a display screen of the apparatus.” Paragraph 29 further states that “[d]isplay related process may include watching a movie on the display screen, such as by playing a CD-ROM (Compact Disc Read Only Memory), DVD (Digital Video Disc), MPEG (Moving Picture Expert Group) file, playing a video file, or similar type functions.” Paragraph 31 discusses step S24 and states that “to check for display usage, the CPU executes instructions to determine whether display related processes are running in the machine S24,” and further states that “such display related processes can be indicative of intensive display use despite no user signal inputs, such as watching a movie or viewing an internet broadcast.”

Independent claim 1 recites a method for adjusting a brightness of a display screen of a system, the method comprising determining whether there are user signal inputs, switching the system into an IDLE mode if there are no user signal inputs, determining processor unit usage indicative of whether certain display related processes are running when an IDLE mode, and adjusting the brightness of the display screen when in auto mode based on processor unit usage.

Independent claim 1 was amended to clarify that processor unit usage indicative of whether certain display related processes are running is determined. This step may be accomplished by, but is not limited to, determining whether display related processes are running, or more specifically by determining if the CPU usage is greater than a reference value (see Fig. 2B; see also claim 5), analyzing key words present in the current processor (see Fig. 2C; see also claim 4), determining whether certain memory devices are in use (see Fig. 2D), determining whether certain read/write devices are in use (see Fig. 2E; see also claims 7-10), or determining whether a modem is in use (see Fig. 2F). Independent claim 1 reads on the species Fig. 2A, and further the claim is generic to the species of Figs. 2B-2F.

Independent claim 13 recites a method for reducing electrical power consumed by a processor unit controlled display screen, the method comprising determining processor unit activity indicative of whether certain display related processes are running, and dimming a brightness of the display screen when the processor unit activity falls below a minimum threshold. Thus, claim 13 also reads on the species of Fig. 2A, and is generic to the species of Figs. 2B-2F. Independent claim 31 recites an apparatus for reducing electrical power consumed by a processor unit controlled display screen, the apparatus comprising means for determining processor unit activity indicative of whether certain display related processes are running, and means for dimming a brightness of the display screen when the processor unit activity falls below a minimum threshold. Thus, claim 31 also reads on the species of Fig. 2A, and is generic to the species of Figs. 2B-2F. Independent claims 32-33, as well as dependent claims 6, 11-12, 14-18, 24, 30, 34-37, 43, 49, and 50-62 also read on the Species of Fig. 2A and are also generic.

Accordingly, at least claims 1, 6, 11-13, 30-31, 49, 50-54, and 57-58 should be rejoined (with claims 14-18, 24-28, 32-37, 43-47, 55-56 and 59-62) and considered by the Examiner.

The Office Action rejected claims 14-17, 24-28, 32-36, 43-47, 55-56, and 59-62 under 35 U.S.C. 102(b) as being anticipated by Hetzler, U.S. Patent No. 5,594,300. Applicant respectfully traverses the rejection.

As discussed at the May 4 personal interview, Hetzler discloses a portable computer with adaptive demand-driven power management. Hetzler teaches entering a power-save mode based on access history. That is, actual user workload is used to determine which power-save mode is most appropriate and when to enter it. See col. 7, lines 43-45. A decision to enter a specific power-save mode is influenced by the recent access pattern for the component. See col. 8, lines 30-33. Access patterns “may be characterized in terms of frequencies, i.e., the rate at which component accesses occur, and a distinction of frequencies may be determined for the access history.” See col. 8, lines 37-40. The recent access patterns are then utilized to determine when to enter a power save mode.

In the May 4 personal interview, the Examiner referred to col. 8, lines 1-29 as being directed to a different embodiment which utilizes keyboard and pointing device activity as evidence of display usage which is utilized to determine whether to enter an IDLE mode and accordingly to control the brightness of the display. However, as discussed during the interview, these lines are not directed to a different embodiment but rather are explanatory disclosure directed to how the Hertzler device determines access history. The access history is then utilized statistically to determine when to exit and enter the power save modes in anticipation of the

beginning and end of a periodic access. The Examiner is directed, in particular, to col. 8, lines 30-51, and more particularly, to col. 8, lines 43-47. The fact that this portion of the disclosure is under the heading "Component Access Frequency" further supports Applicant's arguments.

Independent claim 14 recites a computer-readable medium having stored thereon a sequence of instructions which, when executed by a processor, cause the processor to perform the steps of monitoring a system to determine whether certain display related processes are running, maintaining the brightness of a display if the certain display related processes are running, and reducing the brightness of a display if the certain display related processes are not running. Independent claim 32 recites an apparatus comprising means for monitoring a system to determine whether certain display related processes are running, means for maintaining the brightness of a display if certain display related processes are running, and means for reducing the brightness of a display if certain display related processes are not running. Independent claim 33 recites a method comprising monitoring the system to determine whether display related processes are running, maintaining the brightness of a display if display related processes are running, and reducing the brightness of a display if display related processes are not running. Hetzler does not disclose or suggest such features. Rather, Hetzler determines whether to enter a power-save mode based on a statistical analysis of recent access history, not by determining whether certain display related processes are running.

For at least these reasons, Applicant assert that independent claims 14 and 32-33 are not anticipated by Hetzler. Dependent claims 15-17, 24-28, 34-36, 43-47, 55-56, and 59-62, as well as withdrawn claims 19-23, 29-30, 38-42, and 48-49, are allowable at least for the reasons

discussed above with respect to independent claims 14 and 32-33, from which they depend, as well as for their added features.

Further, independent claims 1, 13, and 31 also define over Hetzler. With respect to independent claim 1, the claimed invention enters the "IDLE" mode absent signal inputs and then determines whether to adjust brightness of a display screen based on determined processor unit usage indicative of whether certain display related processes are running while in the "IDLE" mode. With respect to independent claims 13 and 31, the method of claim 13 includes determining processor unit activity indicative of whether certain display related processes are running, and dimming a brightness of the display screen when the processor unit activity falls below a minimum threshold, while the apparatus of claim 31 includes means for determining processor unit activity indicative of whether certain display related processes are running, and means for dimming a brightness of the display screen when the processor unit activity falls below a minimum threshold. Hetzler does not disclose or suggest such features. As discussed above, Hetzler merely determines whether to enter a power-save mode based on a statistical analysis of recent access history. Dependent claims 2-12 and added claims 51-54 and 57-58 are also allowable over Hetzler for the reasons discussed above with respect to independent claims 1, 13, and 31, from which they depend, as well as for their added features.

The Office Action rejects claims 18 and 37 under 35 U.S.C. 103(a) as being unpatentable over Hetzler in view of Zenda, U.S. Patent No. 5,386,577. Applicant respectfully traverses the rejection.

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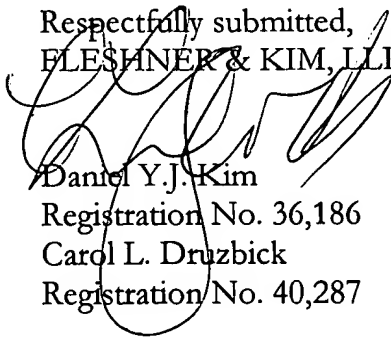
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Zenda is cited merely for detecting low battery state and controlling the luminance based on low battery state, and thus does not overcome the deficiencies of Hetzler, discussed above with respect to independent claims 14 and 33. Accordingly, claims 18 and 37 are allowable at least for the reasons discussed above with respect to independent claims 14 and 33, from which they depend, respectively, as well as for their added features. Accordingly, the rejection of claims 18 and 37 should be withdrawn.

In view of the foregoing amendments and remarks, it is respectfully submitted that the application is in condition for allowance. If the Examiner believes that any additional changes would place the application in condition for allowance, the Examiner is invited to contact the undersigned attorney, Carol L. Druzbeck, at the telephone number listed below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,  
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